

Tidal Wetlands Management Technical Support Grant

Center for Coastal Resources Management

Virginia Institute of Marine Science

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Virginia Coastal Zone
MANAGEMENT PROGRAM

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Product 1: Education / Outreach

Tidal Wetlands Workshop

Shoreline Management Webinar Series

CCRM's annual Tidal Wetlands Workshop was rescheduled as a three-part Shoreline Management Webinar Series due to the coronavirus. Center for Coastal Resources Management staff planned, organized, and presented each event that focused on a different topic and included presentations and live interaction with shoreline science and policy experts. There were 124 unique participants representing 17 local governments and wetlands boards, 9 non-profit organizations, 8 state agencies, 4 regional planning agencies, 4 academic institutions, 2 federal agencies and 4 other affiliations.

Listed below, all presentations and other workshop materials are available online:

<https://www.vims.edu/ccrm/outreach/workshops/2020/index.php>

August 13, 2020 – Shoreline Decision Support Tools

Webinar Recording

Presentations

- Shoreline Decision Support Tool – *Marcia Berman, VIMS CCRM*
- Shoreline Management Handbook – *Pamela Mason, VIMS CCRM*
- Natural & Nature-Based Features for Coastal Resilience – *Pamela Mason, VIMS CCRM*

Related Links

- Shoreline Decision Support Tools Improved, Rivers & Coast, Summer 2020
- Shoreline Decision Support Tool
- Shoreline Management Handbook

August 20, 2020 – Shoreline Law & Policy Updates

Webinar Recording

Presentations

- Changing Legislation for Changing Shorelines: The Wait is Over for Major Resilience Advances – *Skip Stiles, Wetlands Watch*
- 2020 Tidal Wetlands Act Amendments & Updated Wetlands Guidelines – *Rachael Peabody, Virginia Marine Resources Commission*
- Chesapeake Bay Preservation Act (CBPA): HB 504 and Guidance Development to Address Recurrent Coastal Flooding – *V'lent Lassiter, Virginia Dept of Environmental Quality*

2020 Virginia General Assembly Amendments

- Senate Bill 776 Wetlands protection; living shorelines
- House Bill 504 Chesapeake Bay Preservation Areas; preservation of mature trees

Other Related Links

- Wetlands Guidelines Public Workshops Information; VMRC Agency Meetings – Aug. 26, Sept. 9, Sept. 30, Oct. 14

August 25, 2020 – Living Shoreline Performance

Webinar Recording

Presentations

- Living Shoreline Sea-Level Resiliency: Performance and Adaptive Management of Existing Sites – *Scott Hardaway, VIMS Shoreline Studies Program*
- Living Shorelines as Best Management Practices – *Pamela Mason, VIMS CCRM*

Related Links

VIMS Center for Coastal Resources Management

- Living Shorelines
- Forecast and Hind-Cast Load Reductions from Living Shoreline BMPs: Project Report

VIMS Shoreline Studies Program

- Living Shoreline Design Projects
- VIMS Living Shoreline Design Guidance

Publications

Center staff annually produces our *Rivers & Coast* newsletter. The *Rivers & Coast* covers one relevant topic in detail through the use of charts, graphs, maps and photos in an 8-page color publication. The newsletter was mailed to local wetlands boards, is available online and announced through CCRM's quarterly e-newsletter to approximately 2,500 email addresses which include local and state agency personnel, General Assembly members, and interested private citizens. *CCRM e-News* summarizes and communicates a variety of issues that support integrated management of coastal zone resources, announces pertinent publications, programs and events, and points the reader to more detailed information on our website (and others).

CCRM e-News

- **January 2020** – Wetlands Workshop save-the-date, new Decision Support Tool, updated JPAs, CMZ magazine, CCRM peer-reviewed publications, awards, and fellowships, and partner living shoreline events
<https://conta.cc/2UBKBcR>
- **April 2020** – CCRM director retires, CCRM and COVID, Rivers & Coast available, sea-level-report cards, Our Coasts Discovery Lab and GCA award winners
<https://conta.cc/3cedUs3>
- **July 2020** – Shoreline Management Webinar registration, new CCRM leadership, CCRM's annual report, living shoreline bill, biodegradable netting, naming the Carl Hershner Teaching Marsh, and upcoming conferences
<https://conta.cc/3j5mpcY>
- **September 2020**– Shoreline Management Webinar materials online, CCRM peer-reviewed publications, Northern Neck Master Gardeners shoreline evaluation program, and Catch the King Tide dates
<https://conta.cc/3hUWtPk>

Rivers and Coast

- **Summer 2020, Vol. 15 – Shoreline Decision Support Tools; New & Improved** highlights the Shoreline Management Handbook and the Shoreline Decision Support Tool. These two online resources provide easy access to information needed by local wetlands boards, government agency staff, shoreline professionals and property owners as they make shoreline management decisions. The content in these new tools reflect current regulatory and scientific frameworks while using modern digital platforms to improve functionality and access on multiple devices. <https://scholarworks.wm.edu/reports/2065/>

Facebook

CCRM staff continued a social media campaign to increase followers of the CCRM Facebook page and post content to inform our followers about CCRM activities and coastal issues in Virginia. We made efforts to increase the number of followers, posts and tags for this year with support from the VACZM grant. We ended the year with 546 followers about 150 increase from the beginning of the year. CCRM Facebook page fans mostly live in the United States (451), although we reached another 95 people in 28 countries worldwide. Slightly more than half of our fans are women (59%). We continue to tag other entities (mostly State Agencies) that are in the CZM networked program including VMRC, DEQ, DCR, Sea Grant, MPPDC as well as CCRM partners including Wetlands Watch, Virginia Coastal Policy Center, Master Naturalists, Master Gardeners and others, and they have tagged CCRM. CCRM “Posted” statuses, photos, links, videos and more 195 times this grant period. Our highest post reach (unique users who had any of our posts enter their screen) was 524 on a post of the April edition of CCRM e-news. And our greatest engagement (unique users that interacted with our Facebook content – likes, shares, and clicks) was 47 on a post about drone monitoring of shoreline change in York River State Park.

- CCRM Facebook: <https://www.facebook.com/CCRM10/>

The screenshot displays a Facebook post from the Center for Coastal Resources Management (CCRM). The post text reads: "Check out the latest edition of the Center for Coastal Resources Management (CCRM) e-news. We pay tribute, in a small way, to Dr. Carl Hershner on his retirement April 1. And sadly, announce postponement of the annual tidal wetland workshop. For all the news, click on the link. https://conta.cc/3cedUs3". Below the text is a link preview for "MYEMAIL.CONSTANTCONTACT.COM" with the headline "Workshop postponed and other CCRM news ...". The post has 524 people reached and 35 engagements. A "Boost Post" button is visible. The right sidebar shows performance metrics: 524 People Reached, 7 Reactions, Comments & Shares, 1 Like, 3 Love, 0 Comments, 3 Shares, 28 Post Clicks, 0 Photo Views, 11 Link Clicks, and 17 Other Clicks. There is also a section for negative feedback with 0 Hide Post, 0 Report as Spam, and 0 Unlike Page.

Performance for Your Post		
524 People Reached		
7 Reactions, Comments & Shares		
1 Like	0 On Post	1 On Shares
3 Love	1 On Post	2 On Shares
0 Comments	0 On Post	0 On Shares
3 Shares	3 On Post	0 On Shares
28 Post Clicks		
0 Photo Views	11 Link Clicks	17 Other Clicks
NEGATIVE FEEDBACK		
0 Hide Post	0 Hide All Posts	
0 Report as Spam	0 Unlike Page	
Reported stats may be delayed from what appears on posts		

Product 2: General Technical Guidance

Summary

The Center for Coastal Resources Management (CCRM) continues to provide technical advice to the general public, regulatory and non-regulatory authorities. We provide general advice on shorelines and marine issues via phone, email, and/or when feasible on-site. In order to maximize the efficacy of site visit efforts, we focus on requests that involve living shoreline suitability assessments, proposed living shoreline projects and those from more rural localities. Advice draws from routinely used data and tools including on-line resources at CCRM/VIMS, from other coastal partners and agencies, aerial imagery, decision tools and decision models. All general technical guidance is tracked in the Advisory Database and all projects associated with a Joint Permit Application (JPA) are tracked in the Shoreline Permit Database.

Advisory Database: The Center continues to populate an advisory database to track our provision of technical advice outside of the joint permit application process so that we can adapt CCRM's guidance development and outreach program to address issues identified through data analysis.

- Technical Advisory and General Information – 58

Shoreline Permit Database: This database is continuously updated to track Virginia tidal shoreline erosion control projects. Permitted projects and decisions are compared with the preferred shoreline best management approach derived from the Shoreline Management Model v.5; displayed in the Comprehensive Map Viewer; and located in the Comprehensive Coastal Resource Management Portals (CCRMPs) locality portals. During this review, projects are categorized into CCRM-defined types; the location of the projects are geo-referenced; and project information is collected and entered into the database. This information is used to support various CCRM coastal resources management activities.

- Preferred Shoreline Management Approach Reviews – 1798
- Shoreline Management Model v5.1: www.vims.edu/ccrm/ccrmp/bmp/smm/index
- CCRMPs: www.vims.edu/ccrm/ccrmp/index

Historical Permit Records Database: The Center for Coastal Resources Management also serves the historical records for tidal wetland Joint Permit Applications (JPA) in a searchable database online. These records include 31,130 original JPAs and all associated photos, public hearing notices, additional information, and VIMS Reports. All records prior to January 1, 2010 as well as a link to current records can be found on CCRM's website.

- JPA Records: www.vims.edu/ccrm/lwb_info/permits/index

Information concerning the data collected and extracted from these databases is provided in detail in the next section.

Details of Advisory Requests (extracted from the Advisory Database):

Type of Advice Requested:

• Erosion Control Advice (15 of these specific to living shorelines)	20
• CCRMP/Tidal Marsh Inventory/Other CCRM Tools/Data Requests	9
• Plant Recommendations/Plant Identification/Vendor Information	8
• Shoreline (regulations, permitting/grant funding)	5
• Phragmites/Invasive Species Control	3
• Outreach/Training	2
• Miscellaneous (boat wakes, coastal adaptation, TMDLs, habitat, SLR, storm water, etc.)	11

Advice Requested From:

• Citizen/Property Owner	30
• Community/Non-Profit/NGO/Master Gardener/Master Naturalist	9
• Local Government/Wetland Board Staff or Member/Elected Officials	7
• Federal Agencies	5
• Academic/Research	4
• State Agencies (including VIMS)	1
• Contractor	1
• Consultant	1

Of all categories of advisory service requested this grant period, shoreline erosion control as a group topped the list, as it has in past grant periods.

Living Shoreline Requests: Of the advisory requests associated with shoreline erosion control, 75% were related to the living shoreline management approach. Citizens and property owners were the largest group (47%) requesting information on living shorelines followed by Academic/Researchers/Students. Last grant period citizens and property owners were also the largest group requesting information on living shorelines, however coming in second were community groups and non-profits.

Locality Type of Living Shoreline Advice Requested: The percent of living shoreline requests from citizens/property owners living in rural localities this grant period was 20%, down from 24% last year. The percent of living shoreline advisory requests being from suburban localities reduced slightly from 59% last year, to 53% this year. Requests in urban designated localities increase from zero to one. No local governments (represented by local government staff, wetlands board, and elected officials) requested living shoreline advice this grant period.

Living Shoreline Advisory Request Summary: 26% of all advisory requests received during this grant period were in reference to living shorelines, remaining similar to last grant period at 25%. The total number of living shoreline related requests from citizen/property owners and local governments declined from last grant period, while there was an increase in living shoreline related requests from other groups. Site visits were conducted for four living shoreline advisory requests this grant period. Not all requests warrant a site visit.

Living Shoreline Advice Requested By:

LOCALITY	CITIZEN	LOCAL GOV'T	OTHER	TOTAL	LOCALITY TYPE *
Out of State			3	3	NA
Accomack			1	1	Rural
Gloucester	4			4	Suburban
Mathews	1			1	Suburban
Newport News			1	1	Suburban
Northumberland	1		1	2	Rural
Richmond (City)			1	1	Urban
Virginia Beach	1			1	Suburban
Williamsburg			1	1	Suburban
TOTAL	7	0	8	15	

**Locality designation was defined by housing unit density; Rural tracts = less than 64 units per square mile, Suburban tracts = 64 to 1,600 housing units per square mile, and urban tracts = greater than 1600 housing units per square mile. Housing density information obtained from the U.S. Census.*

Details of Data Requests (extracted from the Shoreline Permit Database):

CCRM developed a comprehensive database using Microsoft Access with fillable forms to store Virginia tidal shoreline erosion control permit and associated project information. The CCRM Shoreline Permit Database integrates Virginia project and permit information from a variety of existing sources into one master, searchable database. Center staff continues to populate the database with new information collected from Joint Permit Applications (JPAs) submitted to the Virginia Marine Resources Commission (VMRC); project shoreline site characteristics from local government websites, Google Earth and Bing maps; and preferred shoreline management recommendations from CCRM's derived from the Shoreline Management Model v.5; displayed in the Comprehensive Map Viewer; and located in the Comprehensive Coastal Resource Management Portals (CCRMPs) locality portals.

Data has been collected on 19386 shoreline erosion control projects to date. This includes basic information like the VMRC number; applicant name and contact information; property owner information; contractor; project type, length, impacts, wetlands board decision, board minutes, year built; project location (site address, locality, parcel ID, and lat., long.); fetch and waterway in addition to specific information that is required to support various aspects of CCRM projects, such as field site selection, comparative assessments, and a variety of surveys and analyses of social and natural systems.

Preferred Shoreline Management Approach Reviews:

CCRM reviewed 1798 Joint Permit Applications (JPA) involving shoreline erosion control activities this grant year. Each approved project and permit decision is compared to the recommended preferred management approach derived from the CCRMP's in order to evaluate the agreement between decisions made and the VIMS comprehensive coastal resource management guidance. The goal of the recommended preferred approach is to foster the sustainability of shoreline resources using living shoreline designs where appropriate and applying traditional shoreline hardening only in areas where site conditions make them necessary. These recommendations reflect the Commonwealth's preferred

approach for shoreline stabilization using living shoreline treatments whenever adequate erosion control can be achieved.

JPA's Reviewed for Agreement with the Guidance:

LOCALITY	TOTAL PROJECTS REVIEWED	YES	NO	N/A
Accomack	189	7	92	90
Cape Charles	6	2	1	3
Charles City	6	3	3	-
Chesapeake	10	1	7	2
Essex	74	-	70	4
Fairfax	3	-	3	-
Gloucester	622	99	390	133
Hampton	15	-	8	7
Henrico	1	-	1	-
Isle of Wight	32	1	31	-
James City	78	23	46	9
King George	9	3	6	-
Lancaster	51	7	32	12
Mathews	31	6	17	8
Middlesex	166	44	30	92
New Kent	2	-	1	1
Newport News	13	3	6	4
Norfolk	13	1	11	1
Northampton	26	11	7	8
Northumberland	158	12	129	17
Poquoson	16	1	11	4
Portsmouth	10	-	6	4
Prince George	2	-	1	1
Richmond County	15	3	9	3
Spotsylvania	3	-	3	-
Stafford	3	1	1	1
Suffolk	6	1	5	-
Surry	16	4	9	3
Virginia Beach	139	12	104	23
West Point	2	-	-	2
Westmoreland	51	4	46	1
Williamsburg	1	-	1	-
York	29	-	17	12
TOTAL	1798	249	1104	445

Yes – The number of projects consistent with the guidance recommendation.

No – The number of projects NOT consistent with the guidance recommendation.

N/A – A review of these project locations determined shoreline conditions to be highly modified, containing special geomorphic features or having submerged aquatic vegetation (SAV) present. For these special shoreline conditions, a recommendation is not provided.